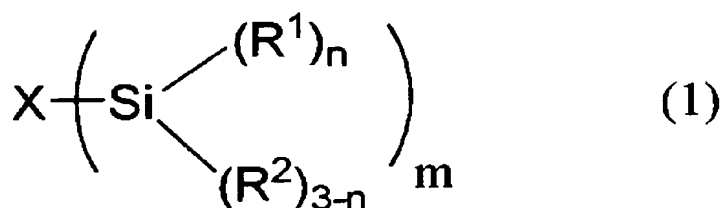


CLAIMS

1. A luminescent material composed of a polymer of an organic silicon compound represented by the following general formula (1):

5

Chemical formula 1



10

[where X is an organic molecule which emits any of fluorescence and phosphorescence; R^1 is at least a member selected from the group consisting of a lower alkoxy group, a hydroxyl group, an allyl group, an ester group, and halogen atoms; R^2 is at least a member selected from the group consisting of a lower alkyl group and a hydrogen atom; n is an integer of 1 to 3; and m is an integer of 1 to 4].

15

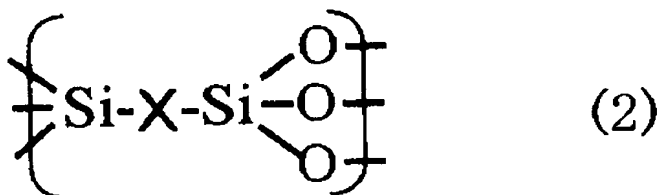
2. The luminescent material according to claim 1, wherein R^1 is a lower alkoxy group and/or a hydroxyl group, and n is 3.

20

3. The luminescent material according to claim 1, wherein R^1 is a lower alkoxy group, n is 3, m is 2, and the polymer of said organic silicon compound has a repeating unit represented by the following general

formula (2):

Chemical formula 2



[where X is an organic molecule which emits any of fluorescence and phosphorescence].

4. The luminescent material according to claim 1, wherein said the difference in energy between the ground state and any of a singlet excited state and a triplet excited state is 40 to 140 kcal/mol in said organic molecule which emits any of fluorescence and phosphorescence.

5. The luminescent material according to claim 1, wherein the polymer of said organic silicon compound has a structure with a period of 5 nm or less caused by a regular array of said organic molecule which emits any of fluorescence and phosphorescence.

6. The luminescent material according to claim 1, wherein the polymer of said organic silicon compound is a porous material.

7. The luminescent material according to claim 1, wherein the polymer of said organic silicon compound is

a mesoporous material having a central pore diameter of 1 to 30 nm.

8. The luminescent material according to claim 6, further comprising another luminescent compound.

5 9. The luminescent material according to claim 8, wherein said another luminescent compound is in a state selected from the group consisting of "adsorbed on," "bonded to," "filled in," and "mixed with" said porous material.

10 10. The luminescent material according to claim 8, further comprising a surfactant.

11. The luminescent material according to claim 8, wherein said another luminescent compound is a phosphorescent material.

15 12. The luminescent material according to claim 1, further comprising another luminescent compound.

13. The luminescent material according to claim 12, wherein said another luminescent compound is in a state selected from the group consisting of "adsorbed on,"
20 "bonded to," "filled in," and "mixed with" the polymer of said organic silicon compound.

14. The luminescent material according to claim 12, wherein said another luminescent compound is a phosphorescent material.

25 15. The luminescent material according to claim 1, wherein the polymer of said organic silicon compound is

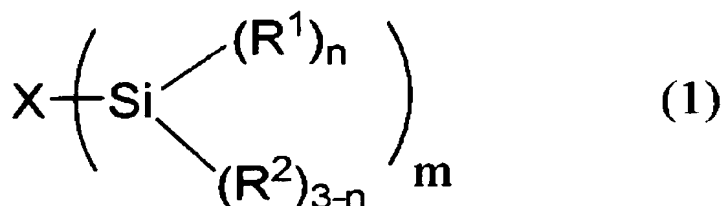
a particulate material having an average particle diameter of 1 μm or less.

16. The luminescent material according to claim 1, wherein the polymer of said organic silicon compound is a film having an average film thickness of 1 μm or less.

17. The luminescent material according to claim 1, wherein the polymer of said organic silicon compound is a layered material of stacked nanosheets, each layer having a thickness of 10 nm or less.

18. The luminescent material according to claim 1, further comprising an electric charge transporting material.

19. A method of producing a luminescent material, comprising a step of obtaining a luminescent material by polymerizing an organic silicon compound represented by the following general formula (1) under the existence of another luminescent compound:



Chemical formula 3

[where X is an organic molecule which emits any of fluorescence and phosphorescence; R^1 is at least a member

selected from the group consisting of a lower alkoxy group, a hydroxyl group, an allyl group, an ester group, and halogen atoms; R^2 is at least a member selected from the group consisting of a lower alkyl group and a hydrogen atom; n is an integer of 1 to 3; and m is an integer of 1 to 4].

20. The method of producing a luminescent material according to claim 19, further comprising said organic silicon compound is polymerized under the existence of said another luminescent compound and a surfactant.